



Rajendran Nair, 3838 E. Encinas Ave, Gilbert, AZ 85234

Re: 10/714,424

IPW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION DOCUMENTATION

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313 – 1450
Attn: Robert J. Grant, Facsimile # 571-273-8300

January 15, 2006

Please find enclosed a response to an office action received for:

Patent application serial no.: 10/714,424

In response to OA mailed: 12/16/2005

Please acknowledge the receipt of this letter and response to the office action. Kindly address all correspondence to the below named inventor.

Sincerely,

Rajendran Nair
3838 E. Encinas Ave.
Gilbert, AZ 85234

Sent by Facsimile AND BY

CERTIFIED MAIL Label Number: 7002 2030 0007 1125 0086 Date: January 15, 2006

I hereby certify that this paper and enclosures and/or fee are being deposited with the United States Postal Service 'Certified Mail Post Office to Addressee' service under 37 CFR §1.10 on the date indicated above and is addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Rajendran Nair

Senders name

Signature

Application #: 10/714,425	F-date: 11/17/2003	Exmnr/Art Unit: Robert J. Grant/2838
Response mailing date: 01/15/2006		Letter reference: OA_10/714424_R1

Response to Office Action dated 12/16/2005

1. Examiner Robert J. Grant's office action summary and detailed explanation mailed on 12/16/05 is hereby acknowledged.
2. Applicant respectfully disagrees with the examiner that the inventions of claims in Group-I (claims 1, 4-13 and 18), Group-II (claims 2, 14-15 and 19), and Group-III (claims 3, 16-17 and 20) are distinct for the following reasons:
 - a. The common element to all independent claims 1,2 and 3 is that the apparatus or methods all relate to a switch device with a P-N junction control gate input that must be provided forward current through the junction for the specific function and advantages conceived of.
 - b. It is the use of a switch device with a P-N junction control gate that requires current flow through the control gate junction for its channel conduction that permits an apparatus with a reduced number of discrete or integrated components for the battery protection system, the method for current-flow estimation that compensates for the substantial change in the switch device 'ON' resistance with temperature through the sensing of the temperature of the device in the forward voltage across the control junction, and the method for device temperature estimation through the forward-biased characteristics of a P-N control junction with temperature.
 - c. Although Group I, termed as a combination in a Group-I, Group-II relationship of combination and sub-combination by the examiner, may be practiced independently of Group-II, through for example the use of prior art current-flow

- estimation techniques, Group-II cannot be employed separately unless aspects of Group-I are embodied, such as a switch device with a P-N junction control-gate, a forward current through the P-N junction control gate of the switch device etc.
- d. In a similar manner, Group-III's method may not be applied in any device that contains a PN junction, such as a MOSFET device with PN junctions at its source and drain nodes, since such devices do not embody key aspects of Group-I, which in this instant are the flow of a 'forward' current through a P-N junction, where the P-N junction is the control gate of the switch device etc.
- e. Additionally, Group-II and Group-III are closely related as well, since the estimation of current flow through the switch device requires the compensation of the temperature dependence of the switch device that is enabled by aspects of Group-III.
3. For the reasons described above, applicant requests search and examination of the application as a whole, and believes that restriction for examination purposes is not called for in this instance.
4. The applicant may be reached by telephone at (480) 355-4147 between the hours of 10am and 4pm AZ time, or (480) 694-5984 on his mobile phone, or by facsimile at (480) 355-4101.

Sincerely,



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